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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,418	08/24/2001	Daniel J. Dove	10015055-1	4205

7590 11/03/2006

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EXAMINER

HSU, ALPUS

ART UNIT PAPER NUMBER

2616

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,418

Applicant(s)

DOVE, DANIEL J.

Examiner

Alpus H. Hsu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-10, 13 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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1. The indicated allowability of claims 1-5, 8, 9, 12 and 13 is withdrawn in view of the references of record to MULLER et al. in U.S. Patent No. 6,044,087 & 6,061,362, and RUNALDUE et al. in U.S. Patent No. 6,108,726, and newly discovered reference(s) to FINDLATER et al. in U.S. Patent No. 5,953,345 & 6,385,208. Rejections based on the newly cited reference(s) follow.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 8, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by MULLER et al. in U.S. Patent No. 6,044,087 or 6,061,362 (of record).

Referring to claims 1, 2, 8 and 13, each of MULLER references discloses an apparatus, an interface, and a method for interfacing a media access controller (MAC) and a physical layer device (PHY) for operating at least one of a gigabit media independent interface and a ten bit interface, and transfer data at a predetermined rate while substantially reducing the required number of input and output pins, by multiplexing data and control signals using both edges of a clock signal having the predetermined rate; and, strategically mapping the data and control signals that are normally applied to a predetermined number of pins to a significantly lesser number of pins while still maintaining the operability of the interface (see col. 4, line 57 to col.

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5, line 24, col. 6, line 66 to col. 7, line 13 in '087, col. 4, line 58 to col. 5, line 25, col. 6, line 66 to col. 7, line 13 in '362).

Referring to claim 12, each of MULLER references discloses the feature of CRS and COL control signals being applied on a single pin (see col. 5, lines 25-34 in '087, col. 5, lines 26-35 in '362).

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by FINDLATER et al. in U.S. Patent No. 5,953,345 (newly cited) or RUNALDUE et al. in U.S. Patent No. 6,108,726 (of record).

Referring to claim 1, each of FINDLATER and RUNALDUE references discloses an apparatus for interfacing a media access controller (MAC) and a physical layer device (PHY) for operating as at least one of a gigabit media independent interface and a ten bit interface, transferring data at a predetermined clock rate while substantially reducing the required number of input and output pins, said apparatus comprising: a multiplexer means-for mapping data and control signals that are normally applied to a predetermined number of pins to a lesser number of pins (see col. 2, line 62 to col. 3, line 41 in FINDLATER, col. 1, line 65 to col. 2, line 22, col. 3, lines 32-47 in RUNALDUE).

5. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by FINDLATER et al. in U.S. Patent No. 6,385,208 (newly cited).

Referring to claim 1, FINDLATER reference discloses an apparatus for interfacing a media access controller (MAC) and a physical layer device (PHY) for operating as at least one of a gigabit media independent interface and a ten bit interface, transferring data at a predetermined clock rate while substantially reducing the required number of input and

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output pins, said apparatus comprising: a multiplexer means-for mapping data and control signals that are normally applied to a predetermined number of pins to a lesser number of pins (see col. 4, line 16 to col. 5, line 10).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over MULLER et al. in U.S. Patent No. 6,044,087 or 6,061,362 (of record).

Referring to claims 3-5 and 9, each of MULLER references fails to disclose the features of specific clock rate range, specific clock input/output skew, specific duty cycle for the clock signal, and specific number of pins to be reduced, which are all well known in the art and commonly used by one of ordinary skill in the art in the device to fulfill the system requirement by the users or designers, which would have been obvious to one of ordinary skill in the art to implement into the apparatus or interface in MULLER to further improve the system reliability and efficiency as desired.

8. Claims 6, 7, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Gandy, Lo and Findlater et al. '138 are additionally cited to show the feature of pin-count reduction for interface between MAC and PHY layer devices similar to the claimed invention.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHH



Alpus H. Hsu
Primary Examiner
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